

REMARKS/ARGUMENTS

Claims 78, 86, 95-97 and 100 have been amended. Claims 1-5, 7-12, 14, 15, 17-27, 39-46, 48-66, 68-78, 83, 86-89, and 95-103 remain pending in the application. In addition, the Abstract has been amended. Applicant respectfully requests reexamination and reconsideration of the application.

Initially, Applicant notes that the specification illustrates exemplary embodiments of the inventions recited in the claims, but none of the claims is limited to any exemplary embodiment in the specification. Regardless of any statement in any office action to the contrary, none of the claims read on only one embodiment of the invention.

The Abstract has been objected to as having too many words. Applicant has amended the Abstract to reduce the number of words. Applicant believes that the amendments to the Abstract overcome the objection.

Claims 48-66, 78, 83, and 86-89 were rejected under 35 USC § 112, first paragraph on the grounds that the specification does not reasonably convey to one skilled in the art that the inventors had possession of the claimed invention at the time the application was filed. Applicant respectfully traverses this rejection.

With respect to claims 48-66, originally filed claim 67 (which as filed depended ultimately from claim 48) recited a reverse wipe feature. As stated in the MPEP, the presence in an originally filed claim of the reverse wipe feature raises a "strong presumption" that there is an adequate written description of the reverse wipe feature. (See MPEP § 2163, pg. 2100-160, col. 2, subsection entitled "A. Original Claims.") Moreover, the specification describes how to cause the spring structure 250 shown in Figure 5A to reverse wipe. Specifically, the specification states that the "[s]pring structure 250 [of Figure 5A] can be made to operate like spring structure . . . 200, by suitable placement of member 220 along the beam." (Specification page 16, lines 23-28.) On pages 15 and 16, the specification describes how to make spring structure 200 perform a reverse wipe. By describing how to make spring structure 200 of Figures 3 and 4A-4C reverse wipe, and then stating that the spring structure 250 of Figure 5A can be made to perform a reverse wipe in the same way, the specification provides more than an adequate written description of claims 48-66. Therefore, the rejection of claims 48-66 under 35 USC § 112, first paragraph should be withdrawn.

Claims 78, 83, and 86-89 were rejected under 35 USC § 112, first paragraph because the specification allegedly does not show a "stop adjustable between different positions." As shown in Figures 8 and 9C-9C, however, beams 502 cannot move past compressible protruding member 560. Thus, compressible protruding member 560, as shown in Figures 8 and 9C-9C, is functionally a stop for beams 502. Moreover, the location of the stop is changed by changing the pressure in tube 568. Figures 10A and 10B also illustrate an exemplary adjustable stop. Whether cam 576 is made of a soft, compressible material or a rigid, incompressible material (specification pg. 24, lines 1-4), beams 502 cannot move past cam device 570. Moreover, Figure 10A illustrates cam 570 in one position, and Figure 10B illustrates cam 570 in a second position. Thus, Figures 8, 9A-9C, 10A, and 10B illustrate examples of the adjustable stop described in claims 78, 83, and 86-89. Therefore, the rejection of claims 78, 83, and 86-89 under 35 USC § 112, first paragraph should be withdrawn.

Claims 48-66, 78, 83, and 86-89 have been rejected under 35 USC § 112, second paragraph, as indefinite. Applicant traverses this rejection on the grounds that a prima facie case that any of these claims is indefinite has not been set forth. As set forth in MPEP, section 2171, the second paragraph of 35 USC § 112 imposes two requirements on claims: (1) the claims must describe what the inventor believes to be the invention, and (2) the metes and bounds of the claimed subject matter must be reasonably ascertainable. It is unclear which of these two requirements of the second paragraph of 35 USC § 112 the Examiner alleges is not met for claims 48-66, 78, 83, and 86-89, nor is it clear why the claims allegedly do not meet the requirement. That one particular figure allegedly does not illustrate a feature set forth in a claim is not grounds for rejecting the claim under 35 USC § 112, second paragraph. Therefore, Applicant requests that either (1) the rejection of claims 48-66, 78, 83, and 86-89 under 35 USC § 112, second paragraph, be withdrawn, or (2) the rejection be explained by identifying which of the two requirements of 35 USC § 112, second paragraph, is allegedly not met and why the requirement is not met, as set forth in MPEP sections 2171-2173.05(v).

Applicant acknowledges with appreciation the Examiner's indication that claims 1-12, 14, 15, 17-27, 39-46, 68-77, 102, and 103 are allowable, and claim 100 contains allowable subject matter. Claim 100 has been rewritten in independent form and should now be allowable. Claim 86 has also been rewritten in independent form and is therefore presumed to be allowable. In

addition, because claims 48-66 were not rejected in view of prior art, Applicant assumes that those claims are allowable over the prior art of record.

Claims 78, 86, 87, and 89 were rejected under 35 USC § 103 as obvious in view of US Patent No. 4,811,246 to Fitzgerald, Jr. et al. ("Fitzgerald"), and claims 83 and 95-99 were rejected as obvious in view of Fitzgerald in combination with US Patent NO. 4,370,011 to Suzuki et al. ("Suzuki"). Applicant respectfully traverses these rejections.

Independent claim 78 states that the beam is spaced from the adjustable device while the beam is in an undeflected position. In contrast, Fitzgerald teaches that it is important for the probe 180 to remain in "tight contact" with vertical transducer 187. Thus, Fitzgerald not only fails to disclose a space between a beam and an adjustable device while the beam is in an undeflected position, Fitzgerald expressly teaches against providing any space at any time between its probe 180 and vertical transducer 187. Suzuki fails to make up for this deficiency in Fitzgerald. Therefore, independent claim 78, as well as dependent claims 83, 86, 87, and 89 are allowable over the prior art.

Claims 95, 98, and 99 were rejected under 35 USC § 102 as anticipated by U.S. Patent No. 6,229,100 to Fjelstad ("Fjelstad"), and claims 95, 98, 99, and 101 were rejected under 35 USC § 103 as obvious in view of Fjelstad in combination with U.S. Patent No. 6,307,392 to Soejima et al. ("Soejima"). Claims 95-99 were also rejected under 35 USC § 103 as obvious in view of Fitzgerald and Suzuki. Applicant respectfully traverses these rejections.

Independent claim 95 includes "pressure means for reducing a bending stress on said beam," and "means for adjusting a pressure of said pressure means." None of Fjelstad, Soejima, Fitzgerald, or Suzuki, whether taken singly or in combination, teach or suggest "pressure means for reducing a bending stress on said beam" or "means for adjusting a pressure of said pressure means." Therefore, independent claim 95 and claims 96-99 and 101 patentably distinguish over the prior art of record.

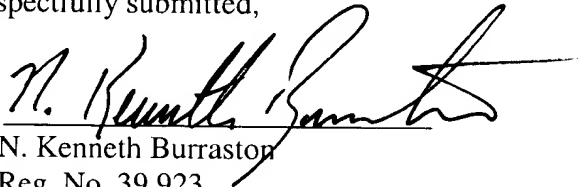
As a final note, Applicant submitted an Information Disclosure Statement (IDS) on September 12, 2002, listing 11 references. In addition, Applicant submitted an electronic IDS (eIDS) on April 23, 2003. The prior art listings in both of those IDS's, however, have not been initialed and returned. Applicant requests an initialed copy of the listings of prior art from both IDS's.

In view of the foregoing, Applicant submits that all of the claims are allowable and the application is in condition for allowance. If the Examiner believes that a discussion with Applicant's attorney would be helpful, the Examiner is invited to contact the undersigned at (801) 536-6763.

Respectfully submitted,

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MICROELECTRONIC SPRING WITH ADDITIONAL PROTRUDING MEMBER

ABSTRACT OF THE DISCLOSURE

Various structural features for modifying the performance characteristics of cantilevered microelectronic spring structures are disclosed. Generally, the features comprise a protruding member mounted between a supporting substrate and the transverse cantilever beam of a microelectronic spring structure, at a distance spaced apart from the supporting structure from which the beam is cantilevered. The protruding member may be equal to the clearance under the beam, less than the clearance under the beam, or adjustable in height; and may be attached or mounted to either the beam or the substrate. The protruding member may include an adjustable pressure device or an electronic element. The protruding member may induce a reverse wipe.